

ISSUE 17 | JULY 2008

Blender learning made easy



**Making Light-Sabers using Blender's composite nodes**

**3 Strip Technicolor Conversion**

**Baking Light Projection And Shadows**

**Using the Sequence Editor**

**Lights, Camera, Action!!**

COVERART - 'Elephants Dream'

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Elephants Dream

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**Sandra Gilbert**  
Managing Editor

*With the use of render layers and nodes for compositing and a fully functional sequence editor, Blender offers you full control when finalizing your animation project.*

Normally "Lights, Camera, Action!" is a phrase we associate with traditional film making, but it applies equally well to 3D animation. Often the order is open to interpretation, depending on project work flows and individual tastes, but the same steps are needed for a successful animation.

Animation projects require far more than just modeling an object or character and animating its movements. Lighting for visual appeal and to set the mood or tone can be a time consuming phase of its own. Then of course there are effects and sound to be added. All in all, the final stages of a production can take just as long as the initial stages.

And as luck would have it, Blender has the tools to make it all that much easier. With the use of render layers and nodes for compositing and a fully functional sequence editor, Blender offers you full control when finalizing your animation project.

Welcome to issue # 17 of BAM. This issue we take a look at using Blenders post processing tools as well as explore some tips and tricks to make your lighting more impressive.

And as a special treat we hear from not one, but two Blender authors as they talk about their new books.

Well what are waiting for? Get reading already.

Happy Blending!

[sandra@blenderart.org](mailto:sandra@blenderart.org)



*At some point or another  
I have tried (or attempted)  
Just about all of them.*

## Output Formats:

You finished your animation project. It was hard work but you overcame all the frustrating obstacles and now you are ready to render your masterpiece, only to be confronted with a confusing number of choices. Which codec is the right one? How do you get sound? Should you render individual images or straight to a video format?

I don't know about you, but honestly this is the part of animating that I dread. New codecs come out all the time and somehow I seem to have every single one of them on my computer. I have no idea which one is best. Some are better for dvds, some are better for viewing online, some I have no idea what they are best for and they all have different compressions, rules, problems and benefits. At some point or another I have tried (or attempted to try) just about all of them with varying results.

Then the ability to actually output sound with my animations added a whole new wrinkle to an already sticky issue. Recently, while attempting to finish up a very simple project, I ran across a great page in the Blender wiki (amazing how much info is hidden in plain sight in that wiki), that answered most if not all of my output questions. And it is ironically enough titled [Output Formats](#). Go figure!

Now I'm not going to reinvent the wheel or copy the whole page here, but I am going to tell you that it explains the Format Panel, the available presets and available options. It even defines all those file formats as well as compression, codecs and the FFMPEG Video and Audio. But the best part of all, (and I am going to just copy this part, because I think it is definitely worth copying) is the Free advice section of the page. It gives you a clear path through the

codec confusion, and for the greater part of it, is just what we need. So, here it is.

## From the BlenderWiki:

### Free Advice

Choosing which format to use depends on what you are going to do with the image.

- If you are going to email it to your friends, use JPG
- Combine it with other images in post processing and simple color/alpha composition, use PNG use nodes to simulate depth of field and blurring, use EXR
- Composite using Render Passes, such as the Vector pass, use Multilayer.

If you are animating a movie and are not going to do any post-processing or special effects on it, use either AVI-JPEG or AVI Codec and choose the XviD open codec. If you want to output your movie with sound that you have loaded into the VSE, use FFMPEG.

If you are going to do post-processing on your movie, it is best to use a frame set rendered as PNG images; if you only want one file, then choose AVI Raw. While AVI Raw is huge, it preserves the exact quality of output for the post-processing.



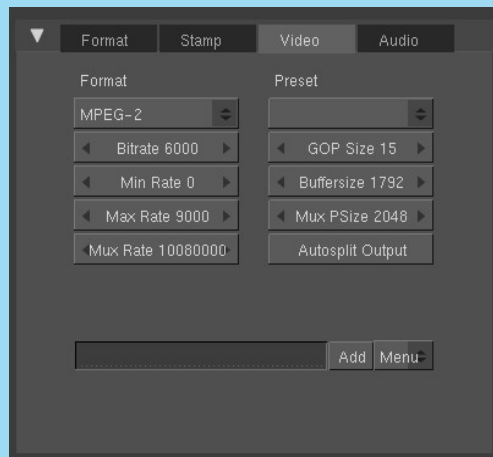
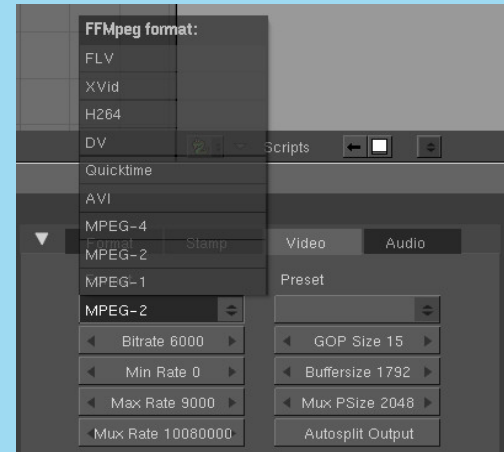
# IZZY SPEAKS : Output Formats!

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After post-processing (compositing and/or sequencing), you can compress it down. You don't want to post-process a compressed file, because the compression artifacts might throw off what you are trying to accomplish with the post-processing.

Note that rendering a long animation to calculate in a unique file (AVI or QuickTime) is more risky than in a set of static images: if a problem occurs while rendering, you have to re-render all from the beginning, while with static images, you can restart the rendering from the place (the frame) where the problem occurred!

One other note, while not a format problem per say, caused me no end of headaches until I saw the [FFMPEG Audio section](#). Adding audio is now possible, but remember to Click the Mux Audio button or you will not get sound, not matter what codec combination you try.



## Blender News!

### Blender Conference 2008

The Seventh Blender Conference will again be held in Amsterdam, and we will return to the original cosy and classy venue "De Waag"!

Dates: Fri-Sat-Sun, 24-25-26 October, Amsterdam, the Netherlands

Expect this to be an exciting and memorable conference once again... with so many Blender projects that have been realized, or are still being realized... one can only imagine what is going to be announced!

- Registration for the conference will open at the end of July.
- We also will offer [full week courses](#), the week before and after the conference, in the studio of the Amsterdam Blender Institute.

Call for [participation details](#).

## SIGGRAPH 2008 The Making of "Big Buck Bunny": An Open-Source Evolution

### SIGGRAPH 2008

Wednesday, 13 August, 8:30 - 10:15 am.

Petree Hall C



In May 2008, the Blender Foundation released their second open-movie project: "Big Buck Bunny," a funny and furry 3D short about a giant rabbit who gets even with bullying rodents. This session brings together the key people who created the movie and presents all the aspects of an open-source and open-content-based animation studio, and how this affects the creative process.

The panelists showcase project files from the studio, and even recreate parts of the film on demand! This 90 minute session starts with a screening of the 10-minute film and ends with a 15-minute Q&A with the audience.

### Moderator

Ton Roosendaal

Blender Foundation

### Panelists

Sacha Goedegebure, Director/Writer

Andy Goralczyk, Art Director

Nathan Vegdahl, Character Animator

"Big Buck Bunny"

Bassam Kurdali, Director "Elephants Dream"

## Apricot Open Game

Development at the Blender Institute has been nothing short of amazing lately with all the improvements being made for Project Apricot.

- [Blender GLSL: Shading Nodes Goodies](#)
- [First Playable Demo](#)
- [Shadow Baking!](#)
- [Progress update, GLSL, shape keys, speedups in the BGE!!](#)

While many of the improvements have been to the game engine, many will translate over to the rest of blender as well.

## Computer game camp in Denmark is the world's largest

*When high school students from all over Denmark gather at Aalborg University to develop computer games it is likely to be the world's largest arrangement of its kind. About 50 young men and women are using a part of their summer vacation to learn more about idea development, animation, programming, and not least, cooperation – from **Pablo Vasquez** and others.*

Lots of "game jams" are held all over the world, where people interested in computer games meet and work together in teams, but each summer when The Danish Youth Association of Science (UNF) comes to Aalborg University, it's an event of an entirely different calibre.

"When you look at the international game jams, there's no real teaching and no targeted thinking about what the participants should get out of the event. It's completely different when we hold Game Development Camp because young people come here also to receive instruction in computer game work as well as critique from business professionals" explains Emil Kjaehr of UNF's organizing group.

Game Development Camp has long been booked to capacity, where about 50 high school students from all over the country share their common interest for computer games in a creative and educational way for an entire week.

Many of the participants have already some experience in developing computer games on their own, but at Game Development Camp, Aalborg University's students and teachers provide a focused introduction to 2D graphics, 3D animation and various forms of computer game programming.

One of the teachers is **Pablo Vasquez from the Blender Institute's Apricot project**. Vasquez is flying in from the Netherlands specifically to instruct the camp participants.

"We don't tell the participants what to do or how to do it. We make sure that they get a solid framework. This is achieved by providing themes for assignments and a range of exciting, professional inputs, all geared toward getting them to unfold on their own and to work together in the groups they are placed in. We also know from our camps in recent years that it makes for a great experience of solidarity and provides other positive experiences for the participants" explains Emil Kjaehr.

Game Development Camp 2008 is by all appearances the largest camp for computer game development in the world and the arrangement can also serve as a nesting box for future game developers. The games that are developed in the last week of July will be judged and commented on by teachers from Aalborg University and by professionals in the field from, among others, the Danish Hitman game giant IO Interactive.

But in order to strengthen knowledge sharing and solidarity across the groups, there is no element of competition where a winner needs to be selected. During the camp, which runs from July 27th to August 2nd, the young participants also have the opportunity to meet game developers, who talk about their career choice and offer recommendations. After the actual camp, the games will be made available to all curious game freaks at [www.game.unf.dk](http://www.game.unf.dk).

The event is sponsored by, among others, the Faculties of Engineering, Science and Medicine at Aalborg University.

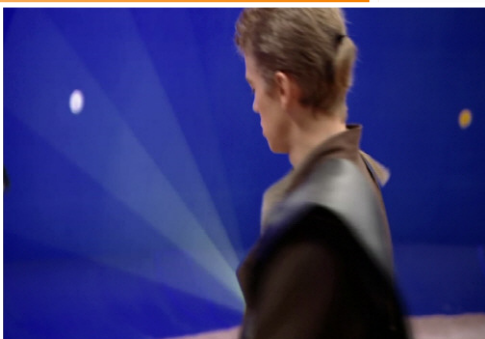
### **Further information:**

Emil Kjaehr, Public Relations Manager, Game Development Camp 2008, tel. +45 28 72 52 31



# 3D WORKSHOP: Making lightsabers using Blender's composite nodes

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## Introduction

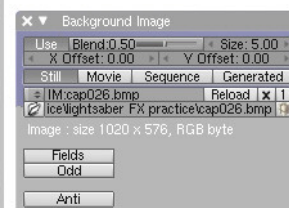
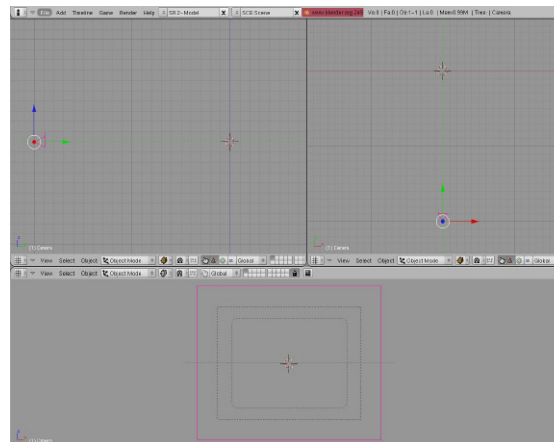
Let's face it, everyone loves lightsabers. Glowing beams that can cut through nearly anything. Many people have wanted to make these in Blender, hence the usual methods of using halos and the lightsaber script.

Many Blender users want the look that others are achieving with the common program Adobe After Effects, but couldn't come to grips with Blender's composite nodes and don't have the cash to fork out on After Effects. Hopefully this tutorial will solve that problem by giving you a method for making lightsabers of professional quality inside Blender.

## Getting Started:

The first thing we need to do is delete the default cube and lamp. Select them (RMB Click) and delete them ('X'). I usually move the camera into position by snapping it to the grid (shift + S) and clearing the rotation (alt + R) and manually rotating it to face the center of the 3d plane.

I then setup my interface for compositing, but you can set it up however you want. Next, go into the cameras POV (numpad 0) and click View>>Background Image on the 3D window header. Load the image or movie that you want to work on into this window. Once it's loaded, make sure the frame size of the image/movie and your render image size is the same.



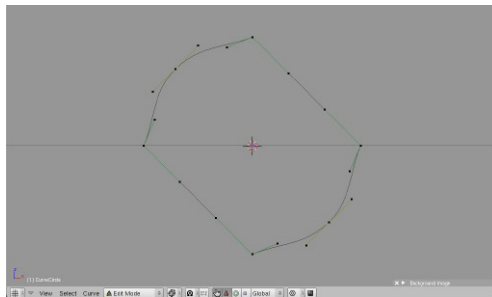
Once that is done, we can add the core. Press Spacebar>>Add>>Curve>>Bezier Circle. Once you have added the Circle, select 2 vertices and hit W>>Subdivide. Do this to opposing ends of the circle, then select the 4 original vertices and press 'V' to make them vector curves. You should have something like this.

By Tyson Benard

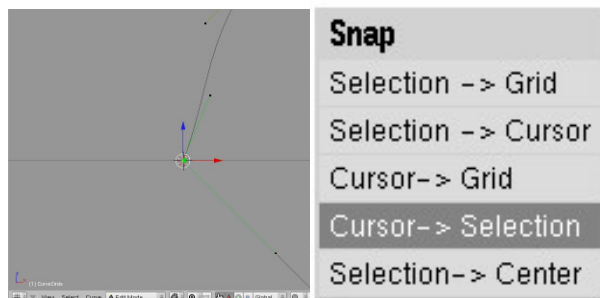
# 3D WORKSHOP: Making lightsabers using Blender's composite nodes

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by Tyson Benard



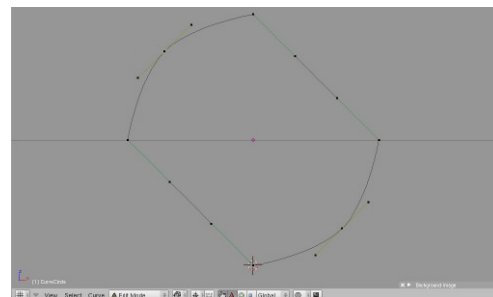
Once that is done, select one of the main vector points, shift-click to deselect the 2 points breaking off of it, and snap (shift + S) the cursor to that point so your cursor is in this position.



Then set the median point to '3d cursor'.



Select the point closest to the Bezier curve and scale it to 0 using the numpad. Do this to all 4 of the vector curves. You should end up with this.



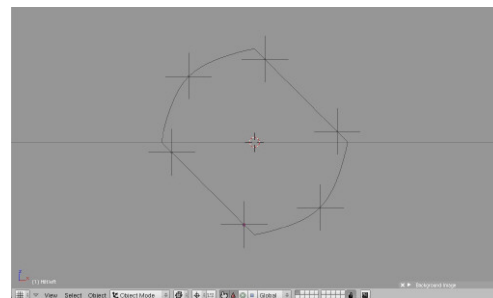
Once you have this shape, double right click on the main vertex of one of the vector curves and press ctrl + H to bring up the Hooks menu and click 'Add, New Empty'.

## Hooks

Add, New Empty

Add, To Selected Object

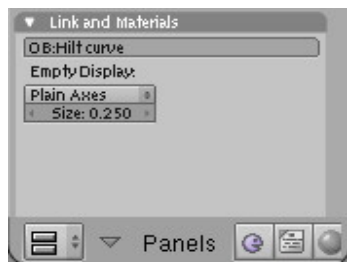
Do this on all 4 vector curves, then single right click on the Bezier curves and add a hook to them as well.



**Note:** I changed my empties to Plain Axes in the edit buttons (F9) while they were selected in object mode. I also named them for reference while editing them for movies and scaled them so they didn't overlap each other.

# 3D WORKSHOP: Making lightsabers using Blender's composite nodes

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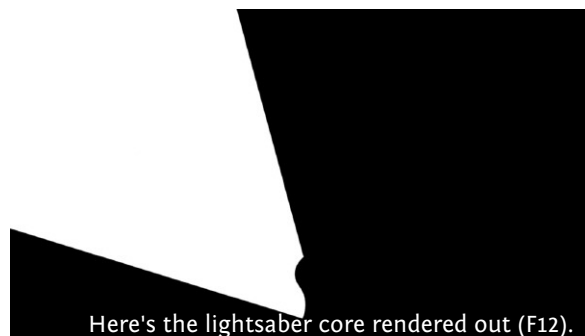
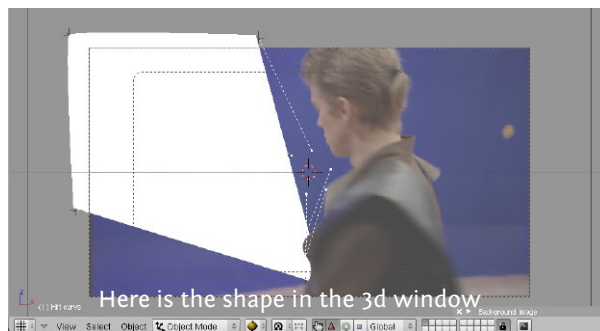


You can now move them to match the lightsaber in your image/movie. If you're doing a movie, make sure to enable 'Automatic keyframing' in the User Preferences window or on the timeline. This will automatically set an

object level keyframe every time you move an empty in object mode. I also recommend adding the empties to a group for easier selection.



**Note:** Once object hooks have been added, don't edit the curve in edit mode unless you delete the relevant hook first. You must then add the hook again to the modified curve. You will not be able to modify the curve in object mode as it is completely controlled by the object hooks.

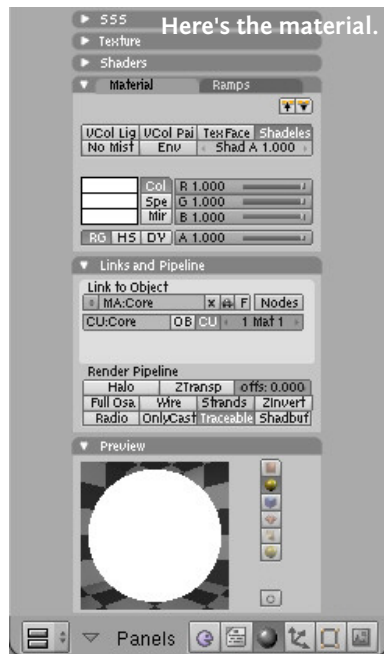


by Tyson Benard

# 3D WORKSHOP: Making lightsabers using Blender's composite nodes

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by Tyson Benard



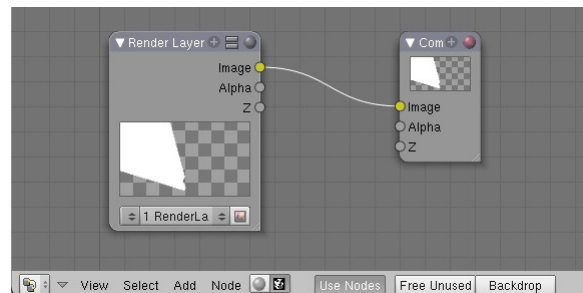
Now we can start to set up the glow in the composite nodes.

In the main window, change the window type to 'Node Editor'.

On the header, press the 'Composite Node' button and the 'Use Nodes' button. You should then see something like this. (Note: when you are editing the nodes and don't need to see the results instantly, whether in the backdrop or a viewer window, deselect the 'use nodes' button. This

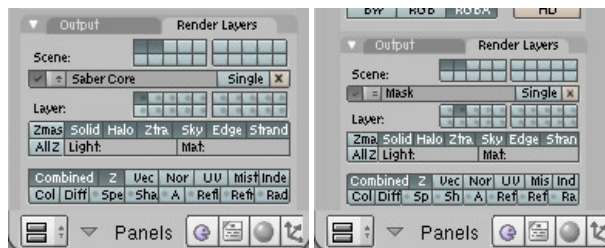
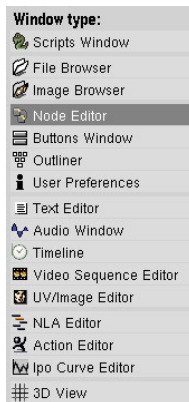
Note: For the part that goes behind him, I simply changed the curve, rotating and scaling the empty that controls it. You could use a more accurate mask, creating a curve just like the lightsaber, but giving it a black material instead of white. Also, make sure the black one is closer to the camera than the saber core object.

will greatly speed up your workflow as Blender won't run the compositing calculations until this button is selected.)



Delete the connection by left-click and dragging a box around it. This box will delete this connection. Then move the two nodes apart to create some workspace.

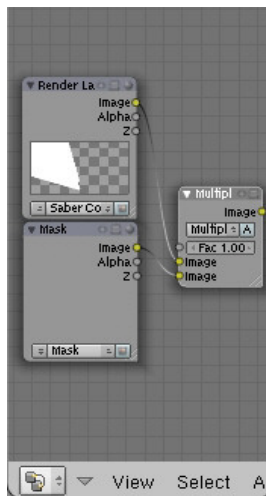
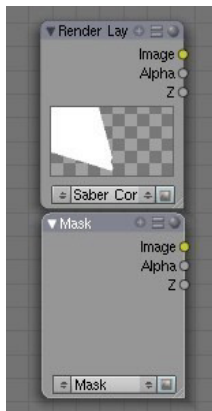
At this point, I can show you another way to create a mask. Create a mask shape, like the lightsaber, but use as many vertices as you need to mask the foreground object that the lightsaber is passing behind. Also, I recommend using many masks to do various parts of an object instead of one mask for everything. This will seriously crowd the interface and the outliner, but with proper naming of objects it should help a lot. Put the mask(s) on a different layer and go into the render settings and change the render settings like this:



To do this, go into the render buttons (F10), and find the 'Render layers' tab. On this, make sure all layers that have objects to render are selected in the top layer selector. On the bottom one, select individual layers that you want to render separately (e.g. the saber core on one layer and the mask on another). This will allow you to composite them in different ways in the compositor.

Once that is done, go into the 'Node Editor' window and Spacebar>>Add>>Input>>Render Layers. Set the new one to the 'Mask' layer and make sure the first one is the saber core.

Once this is done, Spacebar>>Add>>Color>>Mix, and set it to 'Multiply'. Then feed the image output of the mask into the bottom input on the mix node and the saber core into the top, and set the 'fac' to 1.00. Multiply does exactly as it says, it multiplies the value of each pixel, and what you see is the result. In this case, since the mask will have a black object (value=0), this will multiply out to equal 0 and all the transparent areas will be unaffected, thus blocking out the area of the saber that goes behind an object that has been masked. The

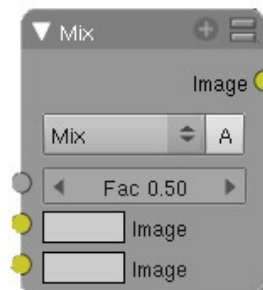


mask layer can also have motion blur and other effects to further enhance the quality of the mask, while leaving the saber core nice and sharp. You can also adjust the 'fac' value lower for slightly transparent masks, such as smoke.

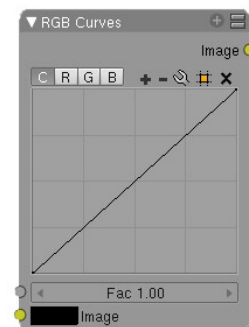
Next, hit Spacebar>>Add>>Filter>>Blur. Change the blur type to 'Gauss' and change the values to X=3 and Y=3. You can change these if you like but this is the value I use to soften the edge of the core. If you want your core to be perfectly sharp then don't blur this first node.



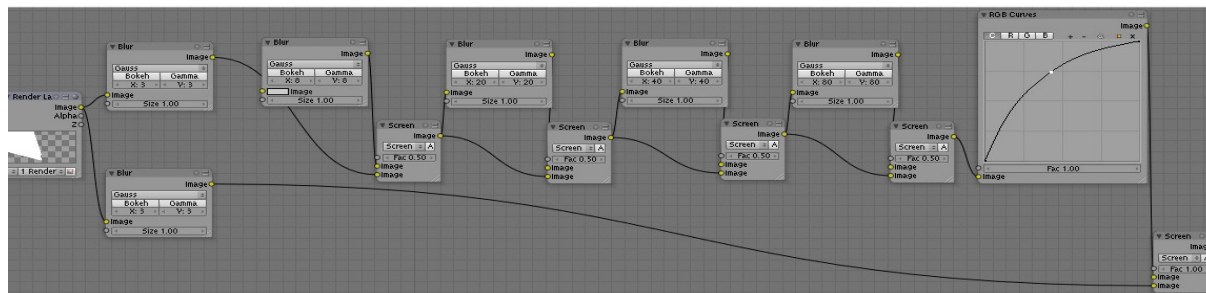
Now press Spacebar>>Add>>Color>>Mix.



Note: In these screenshots, the mask render layer node is not included, but if you do use it, then you can simply feed the output of the mix node right into where you see the 'saber core' render layer.







Change the dropdown menu to 'Screen'. You will then want to duplicate (Shift+D) these nodes and link them together as well as Spacebar>Add>Color>RGB Curves to create this node tree:

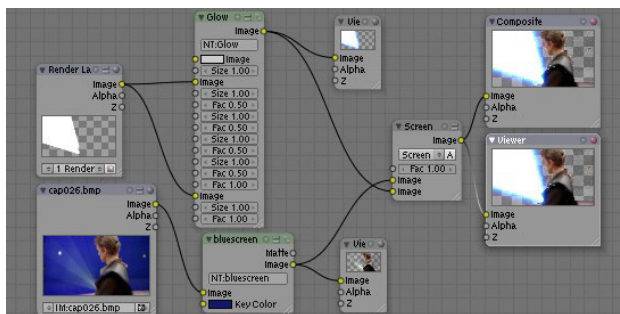
Also, you can add a color ramp instead of RGB curves if you feel more comfortable working with ramps.

The first two blur nodes (above and below each other at the beginning of the node tree) should have the same values. The blur nodes on the top should have progressively increasing values from left to right, creating a smooth, large blur. The last 'Screen' node at the end of this node tree should have a factor of 1 to preserve the white core. If the 'fac' value is less than 1, then the core will not be white.

Finally, duplicate the last 'Screen' node (the 'fac' 1 node) and use it to combine your saber render and your image. To input the image, press Spacebar>Input>Image, and select your image from the dropdown menu. Then link the output of that screen node to the 'Composite' node. Use a viewer node (Spacebar>Output>Viewer) to see if it worked without having to render the whole thing.

Also, in the render menu in the buttons window, be sure to enable 'Do Composite' in the Animation tab to

have it render the composite node tree. This is how it should look:



Note: I did a quick bluescreen key so you can see the lightsaber better and grouped the nodes to conserve space.

I hope you have learned what you hoped to learn here and that this gave you some better insight into Blender's composite nodes.

Thanks for reading! ■



## Introduction

The goal of the effect is to take video imagery and make it look like it was filmed using Technicolor. This can be fairly easy to accomplish using Blender's node system and is just a matter of knowing which settings to use. I am using the same image that was used in the aviator-vfx example.



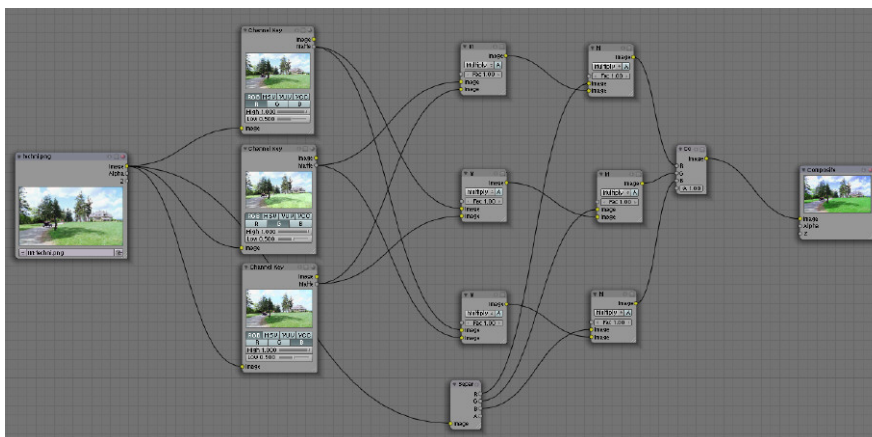
complicated as it looks. First, add three Channel Key nodes from the Matte section and a Separate RGBA node from the Converter section of the Add menu. Take each of these and connect them to the output of the Image node. I will get back to the Separate RGBA node later.

First, set each of the Channel Key nodes to R, G, and B. Also set the Low on each node to 0.5 and the High to 1.0. These nodes let us make masks based on the colors in the image and to use them for the effect we need to combine them. So now we need three Mix nodes from the Color section of the Add menu. Using the drop down, change each node from Mix to Multiply and then connect the two Image inputs to the Matte outputs of the two Channel Keys that are not part of that color.

For the first Mix node it is the Red channel, so we take the Matte outputs of the Green and Blue Channel Keys and connect them to the inputs of our Red Mix node (the order does not matter). After that, we create three more Mix nodes set to Multiply.

Start by bringing up the nodes editing window, selecting Composite Nodes and then Use Nodes. This will add a basic node setup to the screen. Select the Render Layer node and delete it. Now add an Image node found under the Input section of the Add menu. Then select the image you wish to apply the effect to.

Here is the node setup. Don't worry, it's not really as



# 3D WORKSHOP: 3 Strip Technicolor Conversion

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Now we are going to use the Separate RGBA node, connect each output to the appropriate node and for the second node input, use the output of the previous Mix node (again the order does not matter). Finally, add a Combine RGBA node from the Convertor section of the Add menu and connect each Mix node into it. All that is left is to connect the image output to the Composite node and Render. (Make sure Do Composite is selected in the Render Options).

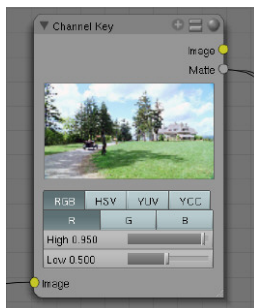
The resulting render is almost done, but there is a slight problem with the bright white parts of the clouds. This is noticeable in the upper left corner so to



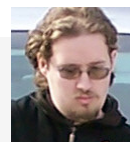
And there you have it - Blender can perform the same compositing effect that was used in a major motion picture. ■



correct this you need to adjust the Channel key amounts. Here I have dropped the High value one of the Red channel to 0.95 and the result looks good. This can be hit or miss, just tweak the high value on each channel by small amounts until you get the desired result.



**Arland B.  
Woodham III**

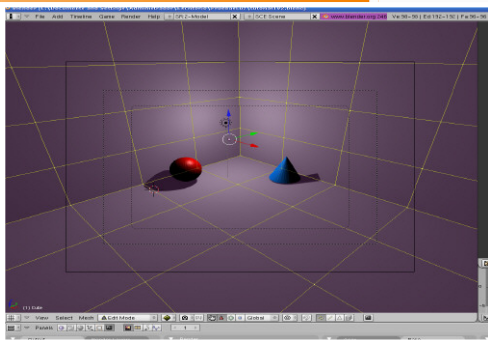


My name is Arland B. Woodham III but, most call me Barry. I am a Graphic Specialist for a company that creates military training courseware.

[Webpage](#)

by Arland B. Woodham III



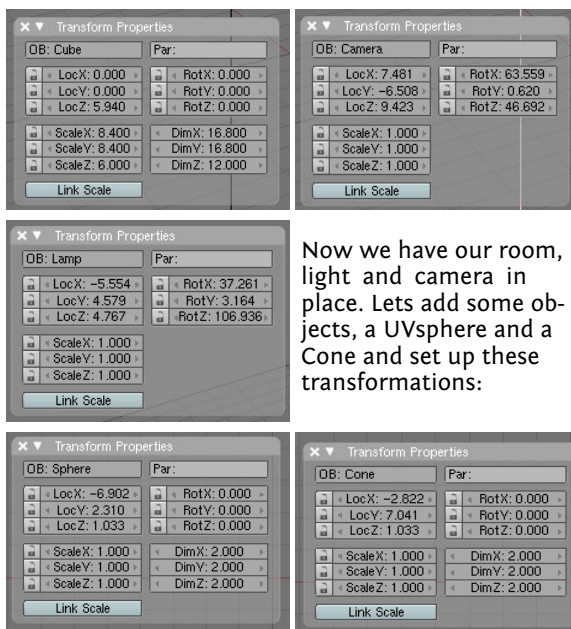


## Introduction

In this tutorial we will bake light projection and shadows on a room. This is a way to emulate an object's shadows. This method doesn't work if the object or light is moving.

### Setting up the scene.

1. **Open Blender into a new scene.** Lets get that default box to be our room walls. Select the box, bring up the transform properties windows (N Key). Insert these values for each object.



Now we have our room, light and camera in place. Lets add some objects, a UVsphere and a Cone and set up these transformations:

We will change the sphere and cone's color by creating two materials.

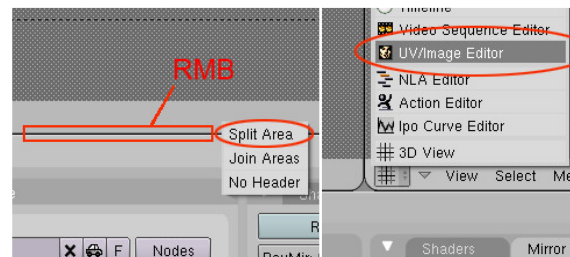
Select the sphere and hit F5 (Shader section) Select Add new and add pure red using the RGB Sliders RGB(1,0,0). Do the same for the cone but change to a different color, try Blue RGB(0 , 0.5 , 1)

One last thing: the cube's normals are looking outside, so if we preview our scene we will not be able to see the walls. Lets fix this by selecting the cube, changing to edit mode (TAB Key), selecting all (A key) and pressing CTRL+F for face specials menu. Select Flip Normals and exit Edit mode (Tab Key again). Now the cube room is ready.

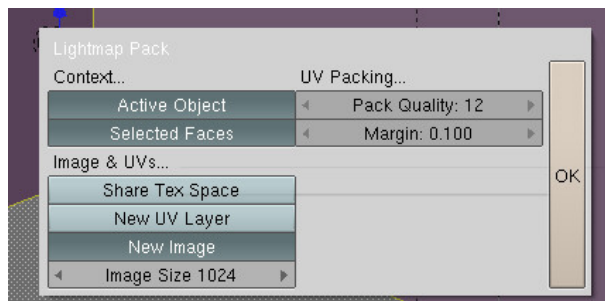
Ok, our scene is done.

### 2. Setting up the walls for baking.

Now we will create a UV Calculation for every face inside the cube. In order to do this we will split the 3D viewport to see the UV/image window.



At 3D view: Select the cube. Enter edit mode (Tab) Select all inside (A) Press U (UV Calculation Menu) and choose "Lightmap UVPack".



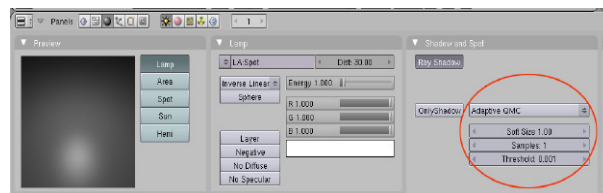
Press New Image and 1024 for image size. 512 would also be fine. It's important to select "New Image" ONLY the first time we are doing this calculation. If we need to calculate the UV's again deselect this option.

Ok. We have a new Black coloured texture for our cube and the UV coordinates. Exit edit mode. Press F10 to go to render options and go to "Bake" menu.



Select our cube if not selected, press the "Bake" button and voilà! We got a nice, shadowed room!

The baked texture must be saved. If you save your scene and quit, you will lose the bake, so in the UV editor, select image-> save, or pack to include the image in the .blend file. You can improve your shadow quality by selecting the light, hit F5(Shading) And increasing Soft size, samples and threshold.



If you need to change your light properties (location, color, ....) you will have to bake again as we just did.



## Some last tips:

You can animate your camera inside the room by changing the UV/Image window to the Ipo Curve editor. Go to frame 1, select the camera, press (I key), and select LocRot to make the first key.

Advance about 100 frames. With the camera selected, press (Shift + F) "fly mode", use the W,A,S, and D keys to move your camera, and click the LMB when you are satisfied with the view. Press (I key) and select LocRot again.

Insert as many keys as you like... once you are finished, hit F4 to go to the Logic Panel. Add a sensor, controller and actuator and set up like this (Camera selected)

Ok that's all... oh, and press P to preview. :P



## Going further:

I wasn't satisfied with the dark shadows and their quality, and thought that will help to understand how blender's light works. For a deeper information about this matter please refer to a [tutorial](#) by Olivier Saraja.

Moving on. First we are going to subdivide the cube a little. This is for adjusting the margins when we have more complex meshes to be baked.

Select the cube. Enter Edit Mode (TAB Key) Select All (A Key). Press W for Specials Menu. Select Subdivide. Subdivide once more Exit Edit Mode

## Now lets light 'em up!

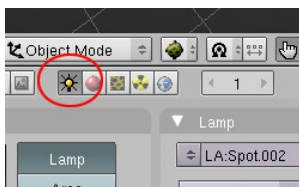
Nowadays, the Lamp light can cast shadows but you can't work with them. We will use spot lights which are more configurable to cast shadows for our objects and emulate the shadows cast by our Lamp light.

In order to do this:

First select the lamp and disable "Ray Shadow". Now we don't have any shadows. With the lamp selected, press Shift+D to duplicate and without moving the mouse press LMB, so we have the duplicated light at the same exact position as the original one.

Because it will be hard to select one or the other light, change the UV/Image window to the Outliner. Within the outliner, select the Lamp.001 and go to Lamp Options.

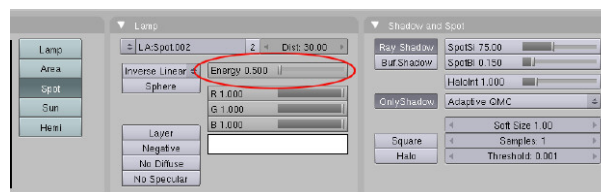
Change the selected Lamp button for Spot. We can see we have more options now. If all goes well the spot will be heading for



our Red Sphere. If not, just rotate the spot to do that. With the spot selected hit ALT+D to create an instance. Without moving the mouse LMB again. We do this because we want the same shadow intensity on both objects.

Rotate Lamp.002 to head toward the cone. Now Select "Only Shadow" for this Lamp.002. Because Lamp.001 and Lamp.002 are instances the options changed in one light will change the other too. Hit F12 to preview the scene. We should have something like this.

Ok, we will handle our shadow's Hardness by controlling the Spot's Energy. Lets try 0.5



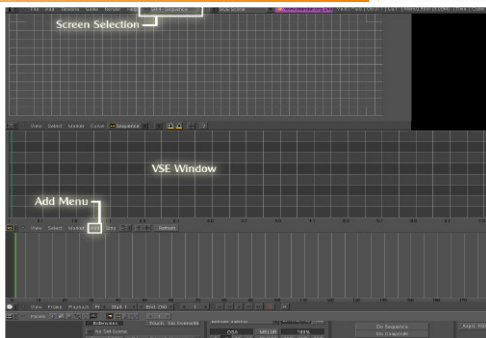
Hit F12 to preview the shadows. It seems much better now.

Lets bake the cube again to draw our new shadows on the wall. Press P to preview in real time. This is much better now, but if we are too close to the objects we can see that they don't have enough resolution.

Samples = 1 Samples=16. Max the light's samples to 16 and bake again. You can try different values at "Shadow and spot section" to get the desired effect. Don't forget to save or repack the baked image before quitting Blender. Ok, that's truly all.

Any questions mail to me at [mackracken2023@hotmail.com](mailto:mackracken2023@hotmail.com)

Cheers! ■



## Introduction

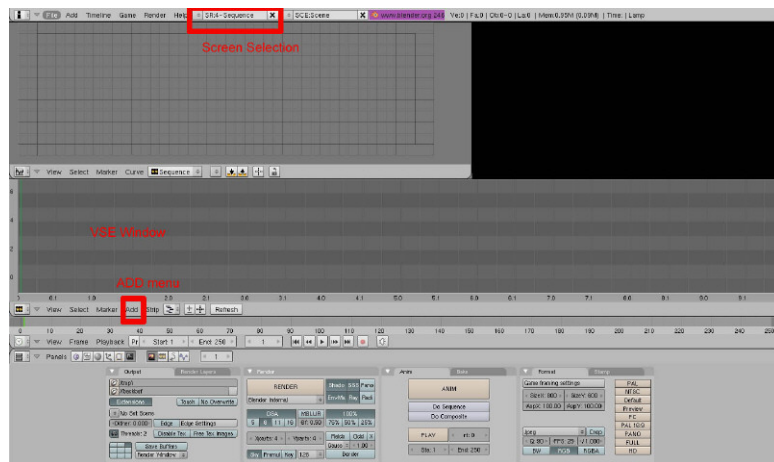
“Do you know what today is?” has got to be the one sentence everyone dreads. It generally heralds you getting into very hot water with someone you care about, over a special occasion you had no excuse to forget. And while the occasion forgotten can be anything from a birthday, anniversary, Mother's day, Father's day to International All About Me Day, the end result is the same, you are in very BIG trouble. It no longer matters

that you had planned to do something special, whether you were going to create the most stunning image then frame and matte it, or produce the perfect animation to commemorate the occasion. Because you obviously got smacked up along side the head with a really big “Whoops, I forgot all about it” stick. Well not to worry, all you need is a couple dozen photos/images, an appropriate song, Blender's Sequence Editor and a couple of hours.

An often overlooked feature, Blender's Sequence Editor is a flexible place for editing your video/animation footage. You can review your video/animation and stitch together different scenes or sections. There are built-in as well as plug-in effects you can use to smoothly transition from one sequence of your video to another.

Even less well known is that the Sequence Editor can also be used to make a quick and easy slide show. Which is what we are about to do. And quite honestly, it really couldn't be any easier.

- 1 First gather up about 2-3 dozen photos (or images) of your choice and an appropriate song. Okay, here we go...
- 2 Change your screen layout to the Sequence configuration (fig1). Now to add your images.
- 3 In the VSE window, Add->Images and right-click each of the pictures that you want to include. If you want to include more than one at a time, just hold down the right button and drag the mouse over their filenames.
- 4 When they are all selected, click the Select Images button and drag and drop the strip to start at frame 1. (If you chose more than 1 image to add, Blender combined all your images into one strip)
- 5 Set your end frame to the end frame of your strip (the number of images selected).
- 6 In the Scene-Render buttons, set your Frames/Second to 1 (format panel) and choose an .avi or .mov format. This will generate a video that shows each image for 1 second.



- 6 In the Scene-Render buttons, set your Frames/Second to 1 (format panel) and choose an .avi or .mov format. This will generate a video that shows each image for 1 second. If you want the slides to play longer than 1 second, you can press Y to separate the image strip into individual image sequences; a pop up dialog will ask you how many frames to make each image (at 25 fps, enter 125 for a five second showing of each image, for example). You can then arrange and re-arrange the individual slides however you want.
- 7 Enter your output filename (output panel), enable Do Sequence, and click Anim.

Pretty darn easy. But maybe just a little boring. Let's add that song you picked out.

- 1 Go back to the Add menu and this time select Audio (HD), browse to your song and select it. WAV format is best.
- 2 Drag it to an empty channel and line it up with our images.
- 3 In the Render Format panel, choose FFmpeg. (fig2)
- 4 An additional Audio panel will appear, (fig3) make sure you select the Multiplex Audio button, or your sound won't be included into your slide show.

Okay now we have audio. If you still have a little time to spare, you can add transitions between each image. There are a number of built-in transitions we can use.

[Add Effect](#)

[Subtract Effect](#)

[Multiply Built-in Effect](#)

[Cross and Gamma Cross](#)

[Fade to Black](#)

[Alpha Over, Under, and Over Drop Built-in Effects](#)

[Wipe Built-in Effect](#)

[Glow Built-in Effect](#)

[Transform Built-in Effect](#)

[Color Generator Built-in Effect](#)

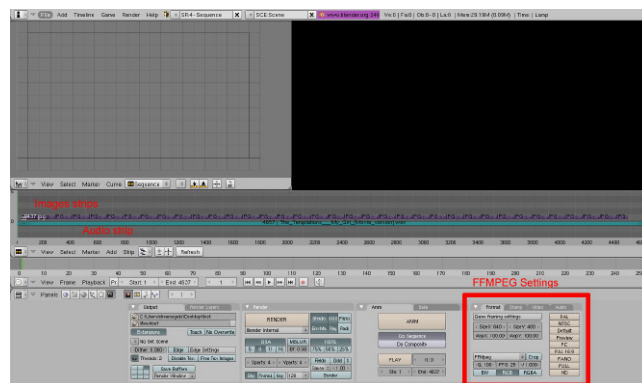
[Speed Control Built-in Effect](#)

[Using Speed for a Slow-Motion Effect](#)

[Using speed control for frame matching](#)

[Changing video frame rates](#)

Let's go with the Wipe effect. There are four different Wipe effects available. Clock: like the hands of an ana-



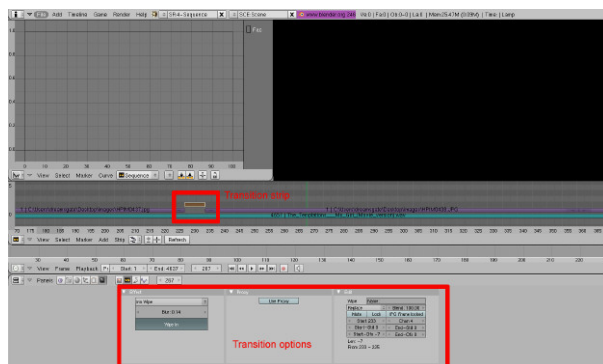
log clock, it sweeps clockwise or (if Wipe In is enabled) counterclockwise from the 9:00 position. As it sweeps, it reveals the next strip.

**Iris:** like the iris of a camera or eye, it reveals the next strip through an expanding (or contracting) circle. You can blur the transition, so it looks like ink bleeding through paper.

**Double Wipe:** Starts in the middle and wipes outward, revealing the next strip. It can also Wipe In, which means it starts at the outside and works its way toward the middle. You can angle and blur the wipe direction as well. **Single Wipe:** Reveals the next strip by uncovering it. Controls include an angle control so you can start at a corner or side, and blur the transition.

To use an effect that makes a transition between two strips such as the Wipe effect, you must Box select or shift-right-click two of them. When you add the effect strip, it will be placed in a channel above the two images in Grab mode (click to drop it on a channel). Its duration will be the overlap between the two strips as a maximum.

You can choose which Wipe effect you want, as well as set the options for it in the Sequencer buttons panel. (fig 3)



Now, once you have added as many transitions as you want, go ahead and render it out. Two important options to remember before rendering:

1. Select the Do Sequence button
2. Select the Multiplex Audio button

Depending on how many images, length of song, number of effects and render options you used, you should have your slide show within just a couple of hours.

This fairly simple project, while only a slide show, shows just how easy it can be to use the Sequence Editor. Now, granted, there are far more options available than we used and when used in conjunction with compositing nodes, the Sequence Editor is capable of producing professional movies and animations with all the polish and pizzazz of Hollywood. For more information on how to use the Sequence Editor, visit the [blender-wiki](http://wiki.blender.org). ■



## Introduction

We all know by now that lighting seems to be my nemesis. And honestly, you would think with all the study and research I have done on the subject that I would be a lighting master by now. Yeah, not even!

But there's a funny thing about obsessive research and study, eventually the volume of information starts to reach a point of critical mass and things start clicking, or in my case, finally registering. For example, I was recently reading the

lighting chapter from Allan Brito's new book (Blender 3D: Architecture, Buildings and Scenery) where he was advising the reader to sit down and think about the lighting. And how it was important to look at your image and define where the light is coming from before you start adding lamps - in other words, "to plan it out".

Now you would have thought that was so obvious that it didn't need stating, but just as obviously, it needed to be stated to me. As I thought about how I generally go about lighting an image, I realized that more often than not, lights just keep getting thrown into the scene, adjusted, deleted, added etc. with no real planning involved.

Depending on your image, planning it out can still be time consuming. Even if you know exactly where you want your lights (lamps), you will still spend time adjusting the intensity (energy) and color. Then there is the whole issue of shadows. But don't despair, eventually you will get the hang of how it all goes together. Of course, it helps if someone points you in the right direction.

For single objects and or portraits that normally use the traditional three point (studio) setup, a rather

dated and overused method, try adding some variation to your setup either with colored lights or altering the positions to add an extra punch to your image. While you can achieve decent lighting with Ambient Occlusion to create general overall lighting, you might instead try a single spot focused on your object and an additional hemi light to add overall brightness. Changing the position of lights can also change the mood or tone of your image, so don't be afraid to move the lights around.

Once you move past single images and portraits is when the real planning begins. To a certain degree, landscapes, interiors and/or any other image that contains logical lighting sources are somewhat easier to plan lighting for. Refining it on the other hand takes practice and experience...or someone to write up a nice little guide explaining how to go about it. :P

... which is just what I found recently while browsing through the [BSoD](#) section of the Blenderwiki. I don't know how I missed it before, maybe I just wasn't yet ready for such relevant information. But there it was, a lighting guide filled with just the information needed to push my understanding past the critical mass point.

Guillermo S. Romero(gsr3d), author of the [BSoD: Introduction to Lighting](#), in addition to explaining lighting in general and lighting options in Blender, included a [series of exercises](#) to explore different lighting conditions. Breaking away from the three point studio setup, using the same scene for each exercise he explains the following lighting conditions:



[Sunny](#)

[Cloudy](#)

[Overcast](#)

[Night](#)

[Variation 1: Movie Full Moon](#)

[Variation 2: House Light](#)

[Flashlight](#)

[Room](#)

[Variation: No Window](#)

One thing I really liked about the exercises, in addition to the fact that he broke down and described what each lighting condition required, is that he actually explained the use of each lamp and what it added to the image. There is even a blend file to study for each exercise.

One last tip, actually a quote from Guillermo:

“Finally, no matter if it should be right based in the values we use, we have to get it to look right, even if that means forcing things, doing nasty cheats to cover issues and taking advantage of our errors if they look fine anyway; or maybe rethinking the original plan a bit. It is not what should be correct, but what looks correct.” ■



The Blender World Cup is an annual competition set up for Blender artists. 2008 is the 5th year it has run, and is proving to be the biggest yet.

Each year the top entrants leave the competition with a nice stack of prizes and a piece of art they can be proud of.

Check it out at:

[BWC.blenderartists.org](http://BWC.blenderartists.org)



# A **MOMENT** In Time

Over **\$1600** in prizes

## The 2008 BWC Trophy



- \$250 CASH from BA.org
- A SpaceNavigator from 3Dconnexion
- A copy of Bounce Tumble and Splash, signed by Tony Mullen
- A Free Pick from the Blender E-shop
- A Free Pick from the BlenderArtists.org shop

## The winner also gets to choose which school gets the following prizes:

- 10 Blender text books from Natcoll
- 10 SpaceNavigators from 3Dconnexion
- Big Buck Bunny, Mancandy FAQ, and Creature Factory from the Blender E-shop

## The 2008 BWC 2nd Place glass

- A SpaceNavigator from 3Dconnexion
- A Free Pick from the Blender E-shop
- A Free Pick from the BlenderArtists.org shop



## The 2008 BWC 3rd Place glass

- A SpaceNavigator from 3Dconnexion
- A Free Pick from the Blender E-shop
- A Free Pick from the BlenderArtists.org shop



*Tony Mullen, author of "Introducing to Character Animation with Blender", has written a new book, "Bounce, Tumble and Splash!".*

*Tony covers the newest physics and dynamics features of Blender in a full color guide to the more complex features of Blender. The book is filled with step by step instructions and in-depth explanations of how each step was taken, and why each choice was made.*

*In a fun community interview Tony answers some of our most burning questions concerning "Bounce, Tumble and Splash!" as well as a surprise or two.*

**Are you currently making a book on the Blender game engine? Any plans to write a new book about Blender? What would that be?**

Thanks for these questions! I guess this is as good a time and place as any to announce my next book, which will be "Mastering Blender" and will be part of Sybex's "Mastering" series (just as "Introducing Character Animation with Blender" was part of their "Introducing" series).

This book will be the most advanced Blender book yet. A large portion of it will be about ordinary Blender functionality, but focusing on features and functionality that are new or have not yet been described in depth in other books. Another significant portion of the book (probably about 4 chapters worth) will be devoted to Python scripting for Blender and all its variations (PyDrivers, PyNodes, PyConstraints, scriptlinks, etc), with the aim of getting newbies and non-programmers up-to-speed with scripting in Python. There will also be a significant section on the game engine, including using Python in the game engine.

It's a little early to say with complete certainty, but I also hope to have some material contributed by some other authors, who are well-known experts in the Blender community. I hope that their contri-

butions will help to make this book especially valuable for people who want to push the envelope of their Blender skills.

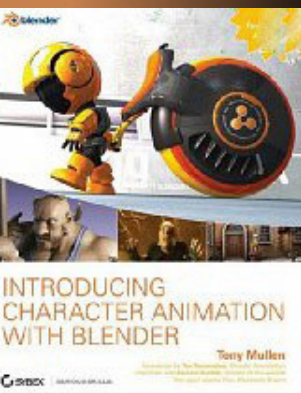
**How hard was it to get a publisher such as Sybex to Publish the Book(s)?**

And was the first book already (in one form or another) written before they accepted it for Publication?

I initially approached several publishers with a proposal for the character animation book that included a full table of contents outline and description of the book (this would all change somewhat when I wrote the actual book). The thing that publishers want to know is what is new and original about the book, and why you think anybody would buy it. At the time I wrote the proposal, all the other English Blender books were out of print, and when I pointed the Sybex folks to the Blender.org website and gallery I think the book proposal sold itself. Some other publishers turned the proposal down, but Sybex was very interested, and they weren't the only ones. It was simply a crime that there were no books on the market at all for Blender, and so the timing was right. My enthusiasm might have been infectious.

**Any suggestions for other people that would like to write a book such as yours?**

My suggestion would be to identify a need and fill that. For me, I was motivated to write the book originally because of my own frustration at not being able to \*buy\* the kinds of Blender books I wanted. If they had already existed it would have never occurred to me to throw my hat into the ring. At this point, there are still a lot of areas and applications of Blender that haven't been dealt with thoroughly in book form. The greatest benefit to the community (and the greatest chance of selling books!) comes if you can contribute something that people can't find elsewhere.



Of course, the field of Blender books is filling up. There are now four Blender books in print in English that I know of, with at least 3 more that I know of on the way, so if you really want to write a book, the big challenge now is to find an original angle.

In other words, don't write a book such as mine, because there already is one!

## How many Fluid Sim tutorials will there be in your book?

I think the chapter on fluids is 60 or 70 pages long (I'd have to go check). There are several step by step demonstrations and some extended in-depth examples. Basically, everything you ever wanted to know about fluid simulation in Blender is covered.

## Will it be possible to buy the book in .pdf?

That's up to the publisher. I think that they usually do release books in pdf form at some point. I'm not really sure why, though, because nobody seems to actually buy those, based on the last royalty report I saw.

*"Bounce, Tumble, and Splash!: Simulating the Physical World with Blender 3D" is going to be my bible until you release your next book. I would like Blender to be taught in major 3D institutes, and I believe that given the strict "traditional" nature of these places, what are the chances of you releasing a book that will appeal to the humorless Head of Departments - like simply "Simulating the Physical World with Blender 3D".*

My experience with heads of departments hasn't always been so humorless, but in any case, if people want to teach the contents of my book, I'm afraid they're going to have to suck it up and buy a book with a catchy title!

Will you ever consider releasing your books as open content? (Not like I wouldn't buy it anyway, I have a copy of Introduction to Character Animation on my desk)

This is an interesting question and I think I could rattle on for hours about it.

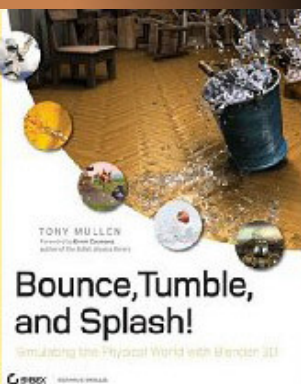
In fact the files that accompany the books, such as the Captain Blender .blends, etc, are already open content. You can use them and distribute them freely according to the text files included with the blends.

The short answer regarding the books themselves is that as long as I'm contracted to work through Sybex or any other mainstream publisher, I don't have the right to decide how the books are released, so no, there's no chance of those books ever being released by me as open content.

The longer answer is that I believe there's still a way to go before the ideal business models have been developed for working with open content, but I would love to see that happen. I could not afford to put in the time and effort it takes to write these books if I wasn't getting paid to do so, so it's really necessary to have a functioning business model. At the same time I believe that open content is the way of the future for a variety of reasons. I admire the Blender Foundation for their efforts and successes at forging a business model based on open content. I also am encouraged when I see bands like Radiohead embrace alternate methods of distributing and getting paid for their work. It's all still fairly experimental, but I think the experiments are yielding some interesting results that will help to create tomorrow's open business models.

For now, though, the royalties system is still the only really reliable means by which a creator's contribution can be remunerated fairly. So I'm happy to be working within the traditional model while it lasts. purchase/delivery from [Amazon](#).

*Tony has also created a little teaser video featuring some of the examples and tutorials found in the book, which can be found on [YouTube](#). ■*



*Allan Brito, author of “Blender 3D – Guia do Usuario”, has written a new book, “Blender 3D: Architecture, Buildings and Scenery”, a guide to using Blender to create architectural visualizations.*

*“Blender 3D: Architecture, Buildings and Scenery” is available for purchase from [Packt Publishing](#), in both printed and ebook format. There are also full color images from the book available for [download](#).*

**Can you tell us a little about yourself and your experience with Blender?**

Sure, I'm a 29 year old architect, who lives and works in Recife, Brazil. Since my graduation in architecture, back in December of 2000, I've started to work with architectural visualization, mostly with 3ds Max for a small studio here in Brazil. A few months later I started to teach 3D modeling and animation as well, and I fell in love with the experience. I have enjoyed so much the experience, that I never stopped teaching 3D.

Back in 2003 I had been invited to test a promising 3D software called Blender. After a few minutes of testing I was already impressed with it! Right after my first contact with Blender I was studying it to make some tests with some of my projects. And as a tryout for my students, I started to teach 3D modeling with both 3ds Max and Blender.

With the use of Blender as both an academic and professional tool, my students asked me for guides and manuals in Brazilian Portuguese. Then I started to write guides and documentation for my students. And then I came up with the idea to write a book about Blender in Brazilian Portuguese (Blender 3D – Guia do Usuario), because by that time there wasn't any updated documentation for Blender, not even in English, and I saw that as an opportunity to help the community and start a book project.

For my projects involving 3D, we completely left behind 3ds Max, and focused our production on Blender in 2004. I'm not at the studio anymore, but I still use Blender for all my projects involving 3D visualization.

**Your 1st Blender book was more of a general introduction to Blender, what made you choose such a specific topic such as architectural visualizations of buildings, interiors, and environmental scenery for your 2nd book?**

Today, Blender has a lot of great books and training DVDs, but most of these materials are related to character animation or general 3D animation/modelling. Since I'm an architect and use Blender mostly for project and design visualization, I miss a book or guide about it. When you start to search about this subject, all the books and tutorials about it, are related to 3ds Max or Autodesk. And with this book I wanted to give the Blender community and other artists the chance to start using Blender to work with architectural visualization, and not be bound only with Autodesk softwares.

**Having used Blender in your work as an Architect, how does Blender stand up compared to other programs used in the architectural industry?**

As a visualization tool, Blender has all the tools to create and render geometry. There are a few tools and features missing in Blender, which could improve and speed up architectural visualization projects. The integration with CAD tools is one of them, if you start to use Blender for archviz, you will see that this is a feature that still needs improvement.

Other programs used in the archviz industry already have a better integration with CAD files, mostly because the company that develops the CAD software is the same behind the 3d visualization suite.



Is it impossible to do that in Blender? No! Of course it's not impossible, but it still requires a few tricks and work with Python scripts.

For me that's the only drawback for Blender compared to other 3d applications, Blender still requires a bit of intermediate knowledge of users, to bypass a few tasks. That's why a book on the subject fit quite well for those artists!

**What improvements would you like to see in Blender that would make your job as an architect easier?**

Architects love precision, and I really would love to see improvements in Blender about the way we can change and model geometry. The render API would be a great improvement too, it would make possible to render scenes with more external renders like Yaf(a)Ray, without the need of special Blender builds.

**Having already written a book about Blender (Blender 3D - Guia do Usuario), what, if anything, did you learn while writing the 1st book that you then applied to the writing of this book?**

In my first book, I was making my first move as an author and it's quite hard to keep on track with a book project of almost 500 pages. For this second book, I have started with a lot of notes and ideas for each chapter. Before the first draft of each chapter, I already knew the points to make the connection or reference between the chapters.

Another thing I learned from the first book is to keep a close eye on the Blender updates. The update cycle of Blender is a nightmare for anyone interested in keeping an updated documentation. Well, as an artist I think it's great! But with a release cycle of 5-7 months it's hard to start and finish a book project at the same Blender version.

For this second book I was always tracking the SVN and testing builds of Blender, to look for new tools or features that could be in the book.

**How long did it take to complete this book?**

This was a long project, I started to work on it in June of 2007 and finished the first draft of the book in December of that year. The revision took a few extra months and the Book was released back in May 2008. It was an eleven-month project!

**Do you have plans to produce future books on Blender?**

Sure! I love to write about computer graphics, and Blender is my favorite subject.

**If so, what topics/titles can we look out for?**

I have plans to write a title about the use of the Game Engine, since I teach it here in Brazil as part of my Blender class. I would love to write a title only about advanced rendering techniques, with external renderers and the composite nodes.

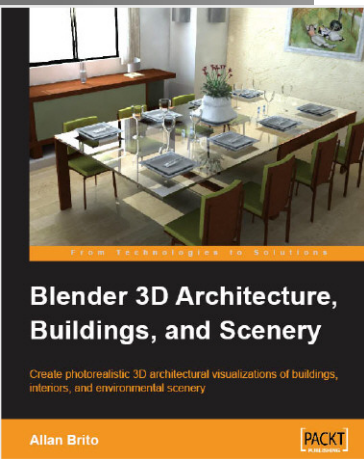
**Is there anything else you would like to mention?**

I hope the community finds the book useful and that it can be a way to make more artists to use Blender. There are already a few projects to improve the features of Blender, especially for architectural visualization and I believe this field will see some great improvements in the next Blender releases.

If you want to discuss architectural visualization with Blender, stop by my web site related to Blender and [archiviz](http://archiviz.com), to check out some tutorials or articles related to architectural visualization with Blender. ■

# BOOK REVIEW: Blender 3D Architecture, Buildings, and Scenery

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*In addition to the printed version there is also a e-book version available for purchase and download.*

Blender is known for it's modeling and animation capabilities, what is less well known is it's ability to produce architectural visualizations and interactive walk-throughs of architectural projects. Seeking to introduce and promote Blender as a valuable addition to the architectural tool set, Allan Brito, a Brazilian architect shares his experience in using Blender to produce architectural visualizations and interactive walk-throughs.

## What's It About?

Blender 3d: Architecture, Buildings and Scenery is broken into fourteen chapters that begin by explaining what is required in architectural visualization and how blender can be effectively used to create and enhance such projects. As the reader goes through the chapters, the author breaks down the different tools in blender and shows how they can best be used for each step in the process. Along the way he offers tips, specific techniques and tutorials/exercises to illustrate the concepts needed to create the various architectural components. In addition he explains how to save time and frustration by setting up an efficient file naming/saving system as well as how to set up and use libraries of previously created models and materials for use in future projects.

While not intended as a general introduction to Blender, as the focus is on using Blender for architectural projects, the author covers basic Blender functionality as well as advanced techniques that could be applied to other areas of Blender usage.

## Presentation:

At 316 pages, Blender 3d: Architecture, Buildings and Scenery, is a good sized book. It is organized in a logical manner that allows for each succeeding chapter to build upon

the previous chapter, yet it is written in such a way that each chapter can be referenced and read on its own.

Following the recent trend of most software books being printed in black and white, Blender 3d: Architecture, Buildings and Scenery is filled with black and white screenshots that for the most part were clear, crisp and easy to read, still, some screenshots as well as the final renders would have been more effective in color.

I enjoyed Allan's writing style and found it easy to understand and follow along. Although there were some typos and places where the casual conversational writing style Allan used to share his experience and expertise seemed awkward and forced, overall his writing style was not only instructional, but effective in conveying his topic.

Although I realize that this book was aimed at introducing architects to Blender, and as such probably didn't need as much detailed explanation for them to follow along, I would have preferred more in depth explanations of some of the sections and more examples in a book of this size and subject matter. It seemed that some areas were only touched on briefly and could have been expanded on more fully.

New users might find this book doesn't explain some concepts thoroughly enough and would be well served to have some basic Blender knowledge first. On the other hand, intermediate to advanced users should have no problem applying the concepts covered.

★★★★★

4/5

**Book Review** by Sandra Gilbert

**Author(s):** Allan Brito

**Publisher:** Packt Publishing

**Language:** English

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**Release date:** May 2008

**ISBN 1847193676**



Blender F1 Challenge  
By Pierlot Damien



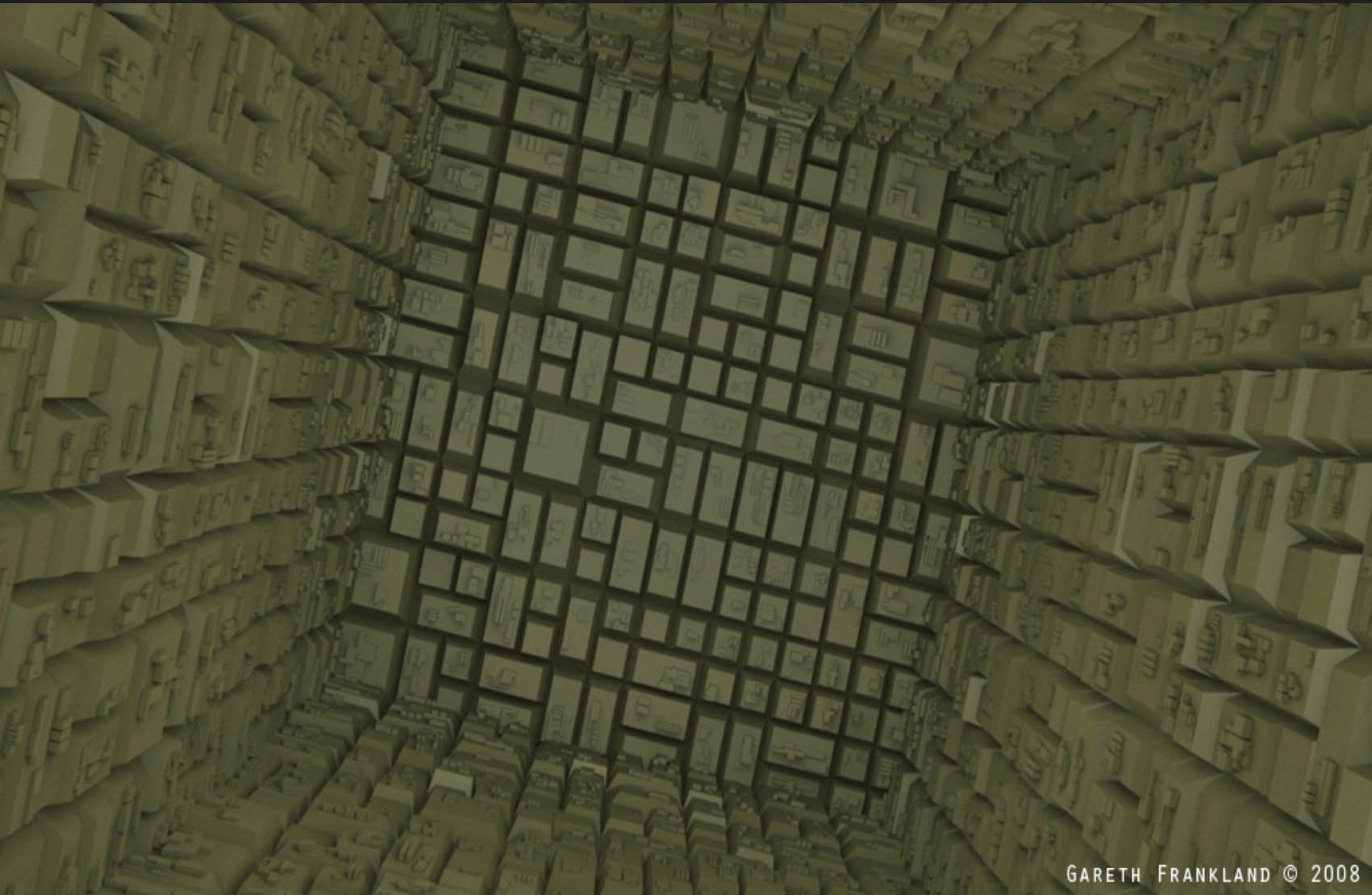




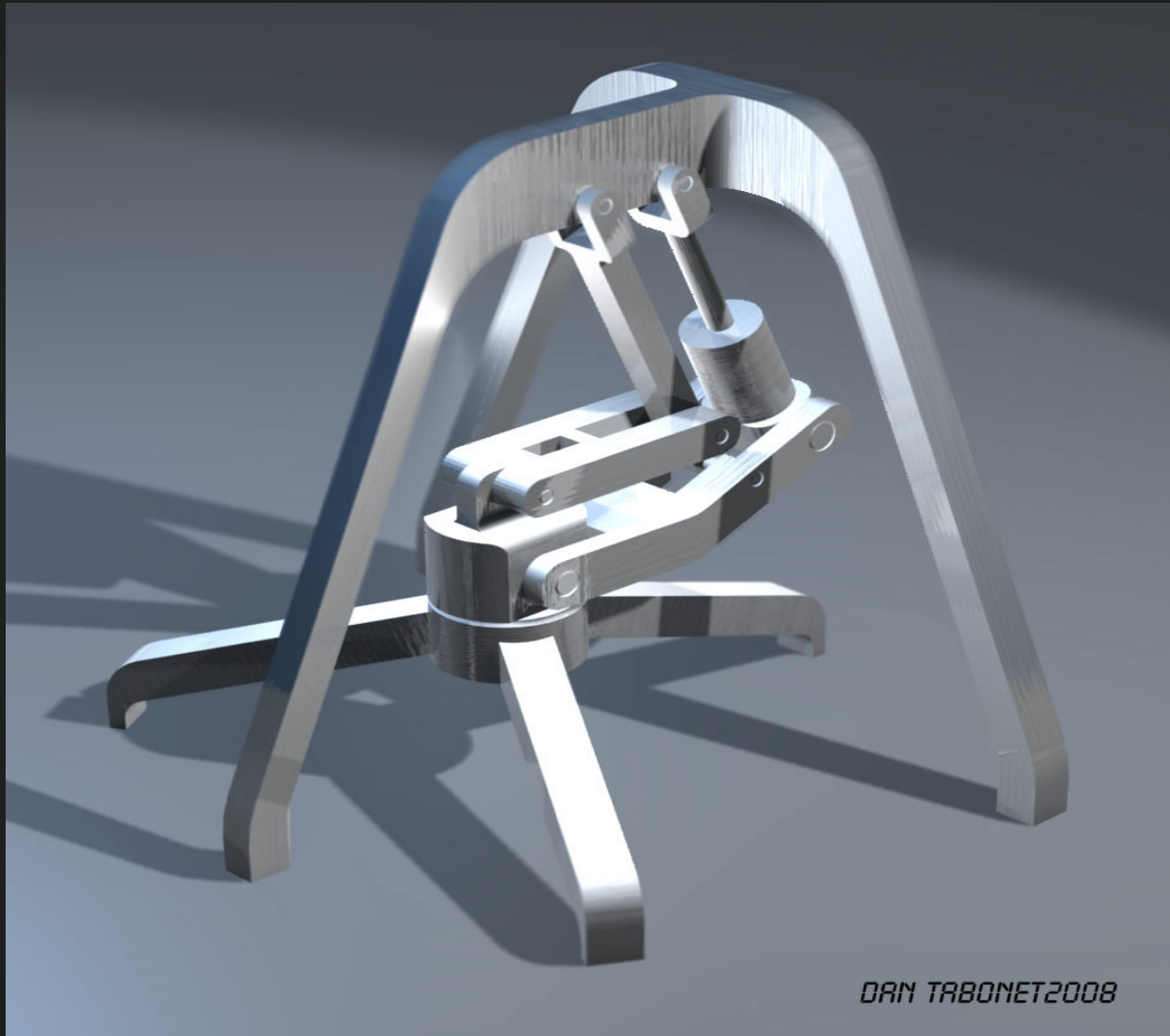
Lumaca Terror - IzE\_Design







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# Want to write for BlenderArt Magazine?

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## Here is how!

### 1. We accept the following:

- Tutorials explaining new Blender features, 3dconcepts, techniques or articles based on current theme of the magazine.
- Reports on useful Blender events throughout the world.
- Cartoons related to blender world.

### 2. Send submissions to [sandra@blenderart.org](mailto:sandra@blenderart.org). Send us a notification on what you want to write and we can follow up from there. (Some guidelines you must follow)

- Images are preferred in PNG but good quality JPG can also do. Images should be separate from the text document.
- Make sure that screenshots are clear and readable and the renders should be at least 800px, but not more than 1600px at maximum.
- Sequential naming of images like, image 001.png... etc.
- Text should be in either ODT, DOC, TXT or HTML.
- Archive them using 7zip or RAR or less preferably zip.

### 3. Please include the following in your email:

- Name: This can be your full name or blenderartist avatar.
- Photograph: As PNG and maximum width of 256Px. (Only if submitting the article for the first time )
- About yourself: Max 25 words .
- Website: (optional)

Note: All the approved submissions can be placed in the final issue or subsequent issue if deemed fit. All submissions will be cropped/modified if necessary. For more details see the blenderart website.



## Issue 18

### Landscapes, Environments and Sets!

- General Landscapes (How to model various landscape elements (trees, hills, rocks etc.)
- Creating Game environments/levels (Low poly elements/ and level design)
- Animation sets (how to create animation sets)
- Building libraries for production purposes for games, animations etc.

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